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ABSTRACT

While the Louisiana State Department of Education does not mandate the total scope of career education programs offered at the local levels, it is essential that a common core of ideas be promoted in order to assess the statewide progress of the programs. The bulletin presents goals and objectives for career and occupational development for ages 9, 13, and 17 based on the national assessment program for these three age levels. Career and occupational development objectives do not belong to a specific discipline but include preparation for making career decisions, improving career and occupational capabilities, possessing skills generally useful in the world of work, practicing effective work habits, and having positive work attitudes. Specific vocational skills have been purposely omitted from these objectives. Each objective for career and occupational development is listed in detail for each age level, with check points on student achievement at three critical periods in school careers: age 9, representing students at or near the end of primary school training; age 13, representing students at or near the end of elementary school training; and age 17, representing students who will soon be finishing high school training. (Author/MF)

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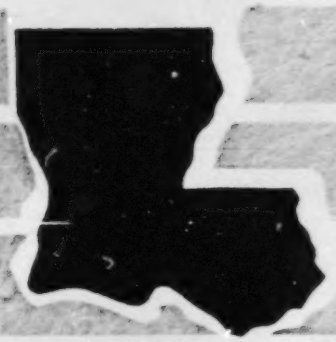

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SEPTEMBER, 1974

LOUISIANA CAREER EDUCATION OBJECTIVES

WHAT SHOULD THEY BE?

Louis J. Michot
Superintendent

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
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LOUISIANA
STATE DEPARTMENT OF EDUCATION

1974

BULLETIN NO. 1409

LOUISIANA CAREER EDUCATION OBJECTIVES

WHAT SHOULD THEY BE?

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STATE DEPARTMENT OF EDUCATION
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Chapter I

INTRODUCTION

In 1973 the Louisiana State Department of Education initiated a statewide assessment program designed to gather base line information on what public school students know and can do in the basic subject areas. Prior to the initiation of this program, no in-depth information existed relative to the knowledge, skills, understandings and attitudes of Louisiana school children. Patented after the National Assessment of Educational Progress program, the Louisiana Assessment of Educational Progress (LaAEP) is designed to collect such base line information in nine basic subject areas: reading, mathematics, social studies, career and occupational development, science, literature, writing, music, and art.

The first year's assessment dealt with reading. During the second year, mathematics and social studies are being assessed. The third year's activity calls for assessment of career and occupational development followed by assessments in the other subject areas identified above. It is projected that within a six-year period, all basic subject areas will have been assessed at least once.

Since the onset of Superintendent Michot's administration, much emphasis has been placed on developing career education programs. All parishes within the state have received special monies to inaugurate programs emphasizing career education. Additional funds were also provided to give in-service training to the professional staff in this area. In addition to the money supplied by the State Department of Education, many local units have spent additional funds on programs designed to strengthen career education offerings.

Although there has been a good deal of leadership exhibited by the State Department of Education, parishes have been encouraged to develop career education programs that they felt were especially pertinent for their needs. Thus, while there is some similarity among career education programs presently operating in the parishes of Louisiana, there is no well-defined set of broad goals or specific objectives that are subscribed to by most of the parishes.

The State Department of Education has no desire to mandate the total scope of career education programs offered at the local levels. It is interested, however, in promoting a common core of ideas that each career education program should encompass. In fact, this is essential if a statewide assessment in career education is to be conducted. Without a skeleton of commonly accepted goals and objectives for career education programs, the task of assessing the progress of career education statewide cannot be fulfilled.

The primary purpose of this bulletin is to begin the process of establishing broad goals and specific objectives for career education in Louisiana. As with the other subject areas we have assessed, we believe that a rich source of ideas to stimulate people across the state to begin to think about broad goals and specific objectives for career education programs is the material that has already been prepared for this subject area by the National Assessment program.

That program has developed goals and objectives for career and occupational development nationwide at three age levels: the 9-year-old level, which represents students at or near the end of their primary school training; the 13-year-old level, which represents students who are at or near the end of their elementary school training; and the 17-year-old level, which represents students who will soon be finishing their high school training. Objectives for these three age levels provide check points on achievement at three critical periods in a student's school career.

The remainder of this bulletin is devoted to a presentation of the objectives developed by the National Assessment program for career and occupational development at these three age levels. We are publishing these objectives in the belief that they will serve as the best starting point for Louisianians to begin to clearly define broad goals and specific objectives that should be included in career education programs throughout the state. Our experiences in developing goals and objectives for Louisiana in mathematics and social studies indicate to us that some of the nationally developed objectives will be found to be very compatible with the desires of Louisianians, while others will either be rejected or modified. In addition, there will no doubt be other goals and/or objectives that will be developed exclusively for Louisiana. It is our intention to work with many groups of Louisianians in developing goals and objectives for career education programs in the state. The career and occupational development objectives presented in this bulletin should be viewed as a starting point and not as the end product.

Chapter II

CAREER AND OCCUPATIONAL DEVELOPMENT OBJECTIVES

9-Year-Olds

Career and occupational development (COD) objectives do not belong to a single discipline. Rather, the area includes many of the general achievements that result from general education and from guidance and counseling. These general achievements include accurate self-evaluation, thoughtful career planning, realistic attitudes toward work, employment-seeking skills, effective work habits, and the development of skills generally useful in a variety of occupations.

Specific vocational or occupational skills have been purposely omitted from the COD objectives listed in this booklet. The objectives included relate to generally useful skills which are required through general education and work experiences and not through specific skills acquired by training in a particular vocation.

The statements related to Objectives I and II, which deal with preparation for making career decisions and improvement of career and occupational capabilities, respectively, avoid the bias of forcing career choices. Behaviors that facilitate long-term flexibility in careers and attendant decisions are described as desirable. Emphasis is on the advisability of setting practical, obtainable goals.

Some terms frequently used throughout the COD objectives could possibly be interpreted in several ways. Within the context of the COD objectives, "work" generally refers to remunerative activity for earning a living. This term can also be correctly interpreted as activity engaged in outside of the nine-to-five world of work, sometimes without remuneration, such as volunteer services and creative pursuits. The "world of work," however, should be interpreted as the

human society of employment, or systems of jobs. "Occupation" is used to refer to a person's principal specialty of work. "Career" refers to a series of jobs over a period of time.

A summary of the objectives and sub-objectives prepared for career and occupational development follows. The detailed statement of COD objectives begins on the next page.

SUMMARY OF

CAREER AND OCCUPATIONAL DEVELOPMENT OBJECTIVES

I. Prepare for making career decisions

- A. Know own characteristics relevant to career decisions
- B. Know the characteristics and requirements of different careers and occupations
- C. Relate own personal characteristics to occupational requirements
- D. Plan for career development or change

II. Improve career and occupational capabilities

III. Possess skills that are generally useful in the world of work

- A. Have generally useful numerical skills
- B. Have generally useful communication skills
- C. Have generally useful manual-perceptual skills
- D. Have generally useful information-processing and decision-making skills
- E. Have generally useful interpersonal skills
- F. Have employment-seeking skills

IV. Practice effective work habits

- A. Assume responsibility for own behavior
- B. Plan work
- C. Use initiative and ingenuity to fulfill responsibilities
- D. Adapt to varied conditions
- E. Maintain good health and grooming

V. Have positive attitudes toward work

- A. Recognize the bases of various attitudes toward work
- B. Hold competence and excellence in high regard
- C. Seek personal fulfillment through own achievements
- D. Value work in terms of societal goals

COD Objectives

I. PREPARE FOR MAKING CAREER DECISIONS

This objective covers knowledge and activities necessary for making informed career decisions. One generally thinks of career planning primarily in terms of high school or college students; however, career planning is a life-long task of exploring and weighing reasonable alternatives. Even among 9-year-olds there are behaviors that will bear fruit later in intelligent career decisions. For 9-year-olds such behaviors include a beginning awareness of abilities and interests, of common occupations, and of the fact that some day they will need to accept adult roles. At the other extreme of adulthood, career planning means weighing current occupational status against capabilities and/or through retraining and change of occupation.

A. Know own characteristics relevant to career decisions.

1. Be aware of own current abilities and limitations.

   Perceive own strengths in physical skills, leisure time activities, home and school responsibilities, interpersonal relations (for example, are aware that they can play baseball but cannot swim, do school homework on time but often forget to do home chores, get along better when playing with a single peer than with a group).

2. Be aware of own current interests and values.

   Discriminate among own current likes and dislikes in leisure time activities and home chores (for example, are aware that they like reading better than music, like riding bicycles more than solving puzzles, like caring for pets better than cleaning up rooms, enjoy group street games more than playing by themselves).

3. Seek knowledge of themselves.

(1) Discuss own interests and abilities with teachers, peers, guidance counselors, and parents (for example, talk about what activities they like and dislike and about problems and successes they have had in school subjects; ask others for feedback about how well they perform various activities).

(2) Participate in activities leading to more informed and accurate perceptions of own interests and abilities (for example, look at and read different books and magazines; have hobbies; do part-time jobs; play many kinds of games or sports; go to various community programs, events and places of interest); know that strengths are gained through exercise of abilities (for example, know that practice is required to become a good pianist, dancer, ballplayer).

B. Know the characteristics and requirements of different careers and occupations.

1. Know the major duties and required abilities of different careers and occupational families.

   Are aware of the main functions of highly visible careers and occupations (such as teacher, housewife, store clerk, waiter, doctor, nurse, service station attendant, policeman, fireman, farmer, mailman, barber).

2. Know differences in work conditions among and within occupational families.

   Know major ways in which occupations differ (for example, physical or mental, indoor or outdoor, work with people or work with things).

3. Know entry requirements for occupations.

   Know that some occupations require more education or training than others (for example, are aware that doctors and teachers go to school longer than barbers and file clerks).

4. Be aware of the impact of social and technological changes on occupations.

   Are aware that some jobs (such as handcraftsmen, elevator operators) tend to become obsolete and new types of jobs (such as space technicians, astronauts, computer operators) are created because of social and technological changes.

5. Know important factors that affect job success and satisfaction.

   Know that job performance often determines whether a person can hold a job (for example, are aware that how well a worker does his job is important for his keeping the job and earning more money).

6. Seek information about occupations in general or about specific jobs.

   For example:

   Ask teachers, counselors, and other adults about what they do at work and what different kinds of workers do on their jobs; visit factories, dairies, and businesses; see films that describe jobs.

C. Plan for career development or change.

1. Consider relevant factors in planning toward an occupation or career.

Are aware that as they become adults there will be a need to make career plans and to understand the responsibilities of adult occupational roles.

II. IMPROVE CAREER AND OCCUPATIONAL CAPABILITIES

Along with planning for a career goes the actual doing of things that further those plans or that widen one's knowledge and skills. This objective is concerned with the implementation of career plans and with active participation in both in-school studies and out-of-school activities that enhance one's career and occupational capabilities.

(1) Attempt to gain as much as possible from school. (Behaviors requisite to success in school are given under Objective IV--Practice Effective Work Habits).

(2) Do home chores (for example, run errands; water flowers; care for animals; help with cleaning; take care of younger siblings; prepare parts of meals).

(3) Engage in hobbies (for example, collect stamps, rocks, and coins; read; draw; paint; play musical instruments).

(4) Visit places of interest in the community (such as planetariums, aquariums, dairies, newspaper plants, museums, zoos, factories, colleges).

(5) Participate in extracurricular and community activities (such as scouts, 4-H, school clubs, organized sports, contests, amateur shows).

(6) Use school and public libraries.

(7) Watch educational television programs.

III. POSSESS SKILLS THAT ARE GENERALLY USEFUL IN THE WORLD OF WORK

The six main categories of generally useful skills are numerical, communications, manual-perceptual, information-processing and decision-making, interpersonal, and employment-seeking. Some of these skill categories apply to other

subject areas in the National Assessment besides career and occupational development. For example, communication skills are related to both the reading and writing areas; numerical skills are included in the mathematics area; information-processing and problem-solving skills include many social studies behaviors; and some work habits and interpersonal relations are also found in citizenship. To minimize overlaps, practical or on-the-job behaviors, rather than academic skills, have been selected to illustrate the COD sub-objectives whenever possible. Second, measures common to other subject areas will not be used in the assessment of generally useful skills but will be referenced in reporting of results.

Although not strictly a generally useful skill, employment-seeking skill has been included under this objective. It is useful not only for initial job entry but also for improvement of occupational status and is a necessary complement to the other generally useful skills.

A. Have generally useful numerical skills.

1. Perform calculations and transactions involving money. For example:

   Make change; total up own purchases; do very simple mental computations without figuring on paper.

2. Understand numerical values in graphs, charts, and tables. For example:

   Read calendars; read bar, line, or circle graphs; read data from height-weight charts.

3. Use measurement equivalents, ratios, and proportions. For example:

   Convert linear, time, liquid, and weight measures, such as feet to inches, minutes to hours, gallons to quarts, ounces to pounds; determine the number of cents in a given denomination of coins.

4. Estimate numerical quantities. For example:

   Estimate lengths of rooms, heights of persons, product and quotient of two small whole numbers; estimate sizes of pieces of paper needed to wrap packages; estimate number of pieces of colored paper needed to cover bulletin boards; estimate time required to complete simple tasks.

5. Compare numerical values. For example:

   Arrange lists of numbers in increasing order of size; state whether one of two given magnitudes is smaller, equal to, or larger than the other; compare weight and size of two objects.

6. Calculate amounts needed to do practical jobs. For example:

   Calculate number of cans of pet food to buy for a certain number of days, how much candy to buy for groups of children, number of pieces of paper needed by classrooms of pupils to do projects.

7. Make graphic representations of numerical quantities. For example:

   Draw lines of specified lengths with rulers; color halves and quarters of circles; make simple bar and line graphs.

8. Interpret statistical data. For example:

   Know order of letter grades and meaning of arithmetical averages; comprehend relative sizes, as of populations.

B. Have generally useful communication skills.

1. Communicate understandably (speak, write, demonstrate, and use non-verbal means).

   a. Explain, describe, demonstrate, and give directions. For example:

   Direct persons to nearby landmarks, using chalkboards or paper to aid in giving directions; instruct others in the rules of children's games; use checkerboards to show how to play checkers; show and tell how to lay out hopscotch grids, make paper hats, address envelopes, and solve puzzles; use felt boards to illustrate class talks.

   b. Give speeches. For example:

   Present book reports; tell about trips taken and events attended.

   c. Write legibly and speak clearly. For example:

   Print and write in script; spell age-appropriate words correctly; pronounce words clearly; use language understandable to peers and associates.

   d. Write reports and summaries. For example:

   Write book reports; summarize movies; write down school assignments.

   e. Write letters, want ads, and telegrams. For example:

   Write letters to sick classmates and thank-you notes to relatives.

   f. Fill out forms. For example:

Complete personal data cards for school and clubs; fill out simple order blanks as on cereal boxes and in magazines.

2. Understand communications.

   a. Understand written instructions, directions, and information. For example:

      Follow printed directions on tests and for assembly of parts; use references such as dictionaries, telephone books, and TV program schedules; follow game instructions.

   b. Understand spoken instructions, directions, and information. For example:

      Understand instructions to run errands and directions to go from one place to another; understand school announcements such as what to do in emergencies; understand information given by speakers and in films.

   c. Understand pictorial, graphic, and symbolic information. For example:

      Distinguish between right and left hands; know meanings of common warning signs; understand ideas presented in progress charts, geographical maps, and line graphs.

3. Interact verbally with others. For example:

   Converse with other persons face-to-face and on telephones; participate in group discussions; relay oral messages verbally and in writing; ask and answer questions; introduce persons.

C. Have generally useful manual-perceptual skills.

1. Use common tools and equipment. For example:

   Use tools such as hammers, screwdrivers, pliers, scissors, manual can openers, rotary egg beaters, bottle openers, rulers, and measuring spoons and cups; use equipment such as roller skates, bicycles, brooms and dustpans, vises, needles and thread, toasters, dial telephones, vending machines, and self-service elevators; operate slide and movie projectors.

2. Make and assemble, using appropriate materials. For example:

   Make posters, selecting paper strength and weight; build wooden bird houses, puzzles, and yard toys, recognizing differences between very soft and hard woods; make doll dresses; make watercolor and finger paintings and papiermache objects; carve paraffin and soap figures; stir and bake premixed cakes; fold and glue bookcovers; assemble tinker toys and erector sets, recognizing that metals are stronger than woods; mount rock, coin, and stamp collections; assemble tabbed cutout and standup scenes and jigsaw puzzles.

3. Adjust, repair, and maintain. For example:

   Set thermostats and alarm clocks; adjust weights on scales; replace batteries in flashlights; sew on buttons; mend tears in clothing and pages of books; lubricate bicycles and roller skates; polish shoes; take care of pets and plants; clear tables and wash dishes; make beds.

4. Read displays and scales. For example:

   Read rulers, room thermometers, clocks, bathroom scales, measuring cup scales, tire pressure gauges, and heat settings on irons; interpret weather vanes.

5. Make visual representations. For example:

   Draw simple maps showing directions to familiar landmarks; draw pictures showing general shapes of objects such as vases and blocks of wood.

D. Have generally useful information-processing and decision-making skills.

1. Learn efficiently and remember specifics, procedures, and principles which are basic to further learning or which are frequently needed in their work. For example:

   Learn new concepts, principles, and skills associated with school curricula; learn and remember new procedures and generally useful skills associated with home and extracurricular activities such as rules for playing games and how to dial telephones; memorize important specifics such as phone numbers, names, addresses, and dates.

2. Apply concepts, principles, and procedures in circumstances different from those in which learned. For example:

   Use arithmetic to add up costs of own purchases at stores; use reading skills learned in school to read books of own choice during leisure time; when outdoors, look for specimens studied in nature classes and for phenomena studied in science classes; use principles of friction to prevent falling on ice or slippery stairs; use knowledge of growth to plant and raise gardens.

3. Analyze information and define problems. For example:

   Distinguish errors in what they observe, read, and hear; note contradictions in different descriptions of the same event; identify errors in arithmetical computations; recognize grossly illogical statements.

4. Collect and organize data. For example:

   Know sources of various kinds of information; list topics to include in letters; can organize information into sensible outlines; schedule a day's play, study, and home chores; schedule activities for small groups of children; arrange items on shelves; organize objects by size, material, and use.

5. Develop and evaluate alternatives. For example:

   Determine alternative routes to walk between school and home and know advantages and disadvantages of each; think of several possible ways to spend an evening and evaluate them in terms of the amount of fun each would offer; evaluate TV programs offering two different types of entertainment; evaluate various possible gifts in terms of the interests and tastes of the intended recipients.

6. Make decisions or choose alternatives in terms of relevant criteria. For example:

   Judge oral class reports of other students by applying given standards; select the most pertinent reference facts to include in reports; decide the sequence in which to perform tasks; choose activity clubs to join; decide which of several motion pictures to attend.

7. Devise plans, new ideas, and better ways of doing things. For example:

   Think of new games to play; think of arguments to persuade someone; make up stories, poems, and tunes; plan parties; think of gifts to buy or make; find shortcuts.

8. Implement and modify plans on the basis of feedback. For example:

   Follow through on activity plans unless unexpected circumstances arise to alter them; work faster to complete projects if time grows short; substitute indoor games for outdoor play if it rains; select different books if first choices are being used by others.

E. Have generally useful interpersonal skills.

1. Interact constructively with supervisors. For example:

   Are receptive to and benefit from suggestions and constructive criticism; comply with reasonable decisions made by teachers, parents, and other persons with legitimate authority; seek assistance when needed; interact effectively to reach common goals, insisting that reason rather than authority be the basis of decisions; defend own rights in face of unreasonable or illegitimate demands.

2. Provide effective leadership. For example:

   Offer suggestions about how to do things; explain what the rules are; help others improve their performances; explain consequences of different choices as bases for group decisions.

3. Work effectively with peers, co-workers, and others. For example:

   Treat others respectfully; share and take turns; present own beliefs and experiences while determining group activities; help others in need of assistance in such ways as assuring that other children are included in

activities, explaining school work, and helping search for lost articles; refrain from making fun of others; tell the truth; return articles borrowed from others; keep promises.

F. Have employment-seeking skills.

(1) Know commonly used terms relating to work (such as employer, employee, and want ad).

(2) Know general factors associated with jobs (such as pay, hours, and vacation).

IV. PRACTICE EFFECTIVE WORK HABITS

Effective work habits are essential to satisfactory job performance, no matter what one's career or occupation. Until a worker has developed good work habits in applying his generally useful and occupationally specific skills, his career and occupational development is not complete.

By the age of nine, children should be exhibiting behaviors in their school work, home chores, and play activities that are the roots of effective work habits. These habits should be more obvious in 13-year-olds, who have had increased opportunities to learn and practice them. The behaviors should have become habitual in the actions of 17-year-olds in school and at work.

A. Assume responsibility for own behavior.

(1) Know they are responsible for their own behavior.

(2) Attend school regularly and are usually punctual for scheduled meetings and appointments (for example, classes, transportation, lunch, school, office, out-of-class meetings, and home schedules).

(3) Pay attention to assignments and explanations; complete and submit homework and project assignments when due; check own work for thoroughness and accuracy.

(4) Do fair share in any group task (for example, do own part of team work, and help clean up classrooms).

(5) Observe rules and regulations, questioning those they believe are unfair.

(6) Keep parents and teachers informed of their whereabouts (for example, field trips, meetings, games).

(7) Avoid damaging others' property and exercise care for own and others' safety.

B. Plan work. For example:

Know when school assignments are due; write down assignments rather than depend on memory; know home and outside group resporsibilities, as for youth groups; allow adequate time to complete assignments before deadlines; have necessary supplies, books, and equipment ready when needed; concentrate on completing one activity at a time; avoid losing time through procrastination and diversion by less important activities; volunteer ideas during group planning.

C. Use initiative and ingenuity to fulfill responsibilities.

1. Use initiative but seek assistance when needed. For example:

Do their work without being prc ded; ask teachers to explain material not understood; ask family members to listen to and prompt memorize material; ask librarians for help in locating reference materials.

2. Are resourceful in accomplishing work. For example:

Think of ways to get home chores done more quickly, as by combining several errands.

D. Adapt to varied conditions.

(1) Adjust to temporary changes in classroom or school schedules (for example, rainy days and assemblies).

(2) Continue to work despite distractions such as noise and visitors.

(3) Tolerate nonideal work surroundings.

E. Maintai good health and grooming.

(1) Attend regularly to personal hygiene (for example, bathe, wash hands before meals).

(2) Go to school health offices, dispensaries, or doctors when sick or injured.

(3) Stay at home when ill or when they have communicable diseases.

V. HAVE POSITIVE ATTITUDES TOWARD WORK

Today more than ever there is a great diversity of life styles. An occupation or career is only one way of achieving personal self-fulfillment in life. Nevertheless, it is possible within the context of career and occupational development to identify desirable attitudinal goals that should result from the educational process. Thus, National Assessment seeks to assess attitudes toward work not only in terms of societal goals but also as acceptance and understanding of the diversity of life styles, regard for competence and excellence in endeavors of many different kinds, and pride in one's own achievements.

A. Recognize the bases of various attitudes toward work.

Know that some people have jobs and others do not.

B. Hold competence and excellence in high regard.

(1) Respect and admire others who try to achieve to the best of their ability.

(2) Recognize and appreciate the efforts and accomplishments of others that merit acknowledgment (such as scholarship, atheletic prowess, and creativity).

(3) Acclaim others deserving of praise or recognition.

C. Seek personal fulfillment through own achievements.

(1) Try to do their best in school and home work.

(2) Enjoy the process of learning and the development of their skills.

(3) Recognize the value of own accomplishments.

D. Value work in terms of societal goals.

(1) Understand the desirability of working.

(2) Are willing to share family responsibility.

Chapter III

CAREER AND OCCUPATIONAL DEVELOPMENT OBJECTIVES

13-Year-Olds

As defined by the Louisiana State Plan for Career Education, 13-year-olds are in the third stage of the sequential career development plan. This stage, known as career exploration, is a time when students begin to examine in a systematic, in-depth way the many job opportunities available within the fifteen job clusters defined by the Department of Health, Education, and Welfare. These job clusters include: Business and Office Occupations; Consumer and Homemaking-Related Occupations; Personal Services Occupations; Health Occupations; Agri-Business and Natural Resources Occupations; Construction Occupations; Marketing and Distribution Occupations; Communication and Media Occupations; Marine Science Occupations; Public Service Occupations; Manufacturing Occupations; Hospitality and Recreation Occupations; Transportation Occupations; Environment Occupations; and Fine Arts and Humanities Occupations.

It is a period when students continue to examine themselves and their abilities, likes, and dislikes in terms of the many jobs they explore. "Hands-on" experiences are strengthened and many simulated work experiences are introduced into the school curriculum during this stage.

The reader is encouraged to review pages 5 and 6 of this booklet before proceeding to examine the 13-year-old objectives listed on the following pages. It should be kept in mind that students at the 13-year-old age level are presumed to have acquired all of the knowledge, skills, understandings, and experiences defined in earlier stages of the Louisiana State Plan for Career Education.

COD Objectives

I. PREPARE FOR MAKING CAREER DECISIONS

This objective covers knowledge and activities necessary for making informed career decisions. One generally thinks of career planning primarily in terms of high school or college students; however, career planning is a life-long task of exploring and weighing reasonable alternatives. Even among 9-year-olds there are behaviors that will bear fruit later in intelligent career decisions. For 9-year-olds such behaviors include a beginning awareness of abilities and interests, of common occupations, and of the fact that some day they will need to accept adult roles. At the other extreme of adulthood, career planning means weighing current occupational status against capabilities and/or through retraining and change of occupation.

A. Know own characteristics relevant to career decisions.

1. Be aware of own current abilities and limitations.

   Are aware of own knowledge and abilities as compared with those of other individuals or groups (for example, perceive correctly that they have more ability in drawing than others in their classes, cannot spell as well as a sibling, know more about mechanics than most persons their age, can do better in social studies than in arithmetic); are aware that abilities and limitations may change with experience.

2. Be aware of own current interests and values.

   Discriminate among own current interests and values (for example, are aware that they are interested in helping or serving others, like or dislike certain school subjects, would rather work with abstract ideas than with concrete objects, would rather sew than cook, like outdoor jobs better than work indoors); are aware that interests and values may change as a result of future experience.

3. Seek knowledge of themselves.

   (1) Discuss own interests and abilities with teachers, peers, guidance counselors, and parents (for example, talk about what activities they like and dislike and about problems and successes they have had in school subjects; ask others for feedback about how well they perform various activities).

(2) Participate in activities leading to more informed and accurate perceptions of own interests and abilities (for example, look at and read different books and magazines; have hobbies; do part-time jobs; play many kinds of games or sports; go to various community programs, events, and places of interest); know that strengths are gained through exercise of abilities (for example, know that practice is required to become a good pianist, dancer, ballplayer).

B. Know the characteristics and requirements of different careers and occupations.

1. Know the major duties and required abilities of different careers and occupational families.

(1) Know which occupations are in the same field (for example, know that pilots, truck drivers, and train conductors are in the field of transportation; know that chemists and biologists are in the field of science).

(2) Know the major duties and required abilities of common occupations and occupational families (for example, science--dentist, engineer, architect; social service--clergyman, social worker, school teacher; clerical--secretary, bookkeeper, bank teller; construction--carpenter, plumber, painter).

2. Know differences in work conditions among and within occupational families.

(1) Know relative income levels for common occupations (for example, know that business executives earn more money than clerical employees; know that skilled workers earn more than unskilled workers; know that airline pilots earn more than stewardesses); understand the effects of public demand upon income in such occupations as writing and acting; understand that fringe benefits differ among occupations (for example, that civil servants and union members typically have prescribed benefits whereas the self-employed must plan own benefits).

(2) Recognize that occupations influence the kind of home life persons have (for example, are aware that truck drivers frequently are away from home; know that farmers sometimes must work long hours; know that shift jobs may require work at night).

(3) Know which people in different occupations work together (such as editors and authors; carpenters and contractors; nurses and physicians); know which people have minimum work contact with others (for example, artists, game wardens, housekeepers).

3. Know entry requirements for occupations.

(1) Know relative levels of education required for common jobs (for example, know that engineers go to school longer than technicians, doctors go longer than nurses; know that airline pilots receive more training than stewardesses, machinists more than drill press operators;

know that no special education is necessary for manual laborers, farm hands, gas station attendants, and custodians).

(2) Are aware that there are relationships between school curricula and occupational families (for example, know which courses are college preparatory, which are commercial, which are technical; know that college careers can be pursued and college attended without taking the college preparatory program).

(3) Know that there are alternate routes to some occupations and that formal education may not be the sole means of entry (for example, know that experience is sometimes accepted in lieu of education; know that training and experience can be obtained in the military service as well as in formal schools).

4. Be aware of the impact of social and technological changes on occupations.

Are aware that some jobs (such as handcraftsmen, elevator operators) tend to become obsolete and new types of jobs (such as space technicians, astronauts, computer operators) are created because of social and technological changes.

5. Know important factors that affect job success and satisfaction.

(1) Know positive and negative factors that may result in advancement on jobs or in demotion or loss of jobs (such as effectiveness of work habits; quality of job performance; how the worker gets along with others; workers' attitudes; changes in job markets; favoritism; prejudice; organizational memberships; type and extent of required skills).

(2) Are aware of some reasons why people change jobs (such as to make more money; because they are fired; because they did not like their boss or the work; to broaden their experience; to meet new people; for self-fulfillment).

6. Seek information about occupations in general or about specific jobs. For example:

Read about various vocations; observe and talk with workers.

C. Relate own personal characteristics to occupational requirements.

1. Associate own abilities and limitations with possible success in present or future occupational pursuits.

(1) Know own skills which might be used in part-time jobs (for example, mowing lawns, stocking merchandise, babysitting, delivering newspapers, carrying heavy objects, making change, preparing meals, sewing garments).

(2) Recognize own deficiencies while realizing that many can be overcome and, thus, do not necessarily preclude entry into desired training or occupations.

2. Relate personal interests and values to job characteristics and occupations.

   Associate current interests and values with potential career fields (for example, associate concern for effects of pollution with possible career in ecology, interest in sewing and cooking with homemaking, interest in engines with the mechanical or engineering fields).

D. Plan for career development or change.

1. Consider relevant factors in planning toward an occupation or career.

   (1) Relate the educational process to securing training basic to most occupations (for example, understand that the knowledge and skills they learn in and out of school will be beneficial to them and others in their future adult roles).

   (2) Relate their planned curricula to own tentative career goals, modifying as new decisions are made (for example, plan to elect mathematics courses if they tentatively plan to be engineers, technical courses if they plan to enter vocational-technical training programs, agricultural courses if they plan to assume responsibility for family farms).

2. Be aware of alternative career choices or occupations and consider the consequences of career changes.

   Are aware that the old pattern of a permanent, life-long career is no longer prevalent and that an occupational preference does not necessarily lock one in permanently.

II. IMPROVE CAREER AND OCCUPATIONAL CAPABILITIES

Along with planning for a career goes the actual doing of things that further those plans or that widen one's knowledge and skills. This objective is concerned with the implementation of career plans and with active participation in both in-school studies and out-of-school activities that enhance one's career and occupational capabilities.

(1) Attend educational events outside of school (such as science, agricultural, trade, and county fairs; musical programs; auto shows; plays; travel lectures; art exhibits; industrial displays).

(2) Engage in part-time work (such as delivering papers, baby-sitting, gardening, helping in stores, raising livestock).

(3) Participate in coursework outside of regular school schedule (for example, attend summer school; take courses offered through youth programs).

III. POSSESS SKILLS THAT ARE GENERALLY USEFUL IN THE WORLD OF WORK

The six main categories of generally useful skills are numerical, communications, manual-perceptual, information-processing and decision-making, interpersonal, and employment-seeking. Some of these skill categories apply to other subject areas in the National Assessment besides career and occupational development. For example, communication skills are related to both the reading and writing areas; numerical skills are included in the mathematics area; information-processing and problem-solving skills include many social studies behaviors; and some work habits and interpersonal relations are also found in citizenship. To minimize overlaps, practical or on-the-job behaviors, rather than academic skills, have been selected to illustrate the COD sub-objectives whenever possible. Second, measures common to other subject areas will not be used in the assessment of generally useful skills but will be referenced in reporting of results.

Although not strictly a generally useful skill, employment-seeking skill has been included under this objective. It is useful not only for initial job entry but also for improvement of occupational status and is a necessary complement to the other generally useful skills.

A. Have generally useful numerical skills.

1. Perform calculations and transactions involving money. For example: Figure simple budgets for allowances; total bills of sale.

2. Understand numerical values in graphs, charts, and tables. For example: Look up sales tax in tables; read dimensions on drawings; determine distances on maps; locate streets by coordinates on city maps; look up drill and bolt sizes; read shoe and sock size conversion tables.

3. Use measurement equivalents, ratios, and proportions. For example:

   Double recipes; adjust dress patterns for accurate fittings.

4. Estimate numerical quantities. For example:

Estimate areas of geometric figures such as rectangles; estimate width of streets, size of windows; estimate distances in sports as for races and setting up baseball diamonds.

5. Compare numerical values. For example:

   Compare common fractions with decimal fractions, areas of two geometric figures, prices of magazine subscriptions with monthly costs.

6. Calculate amounts needed to do practical jobs. For example:

   Calculate number of cans of paint required to paint given areas, pounds of meat to serve a certain number of persons.

7. Make graphic representations of numerical quantities. For example:

   Construct line, bar, or circle graphs to depict given data; draw geometric figures with given areas; make scale drawings of rooms of specified sizes; draw angles of given sizes with protractors.

8. Interpret statistical data. For example:

   Understand batting averages; understand concept of range; figure out trends from information such as population growth, accidents; distinguish between associations and causality.

B. Have generally useful communication skills.

1. Communicate understandably (speak, write, demonstrate, and use nonverbal means).

   a. Explain, describe, demonstrate, and give directions. For example:

   Tell and demonstrate how to assemble model airplanes and cars, look up material in libraries, adjust machinery, make cakes, and use simple patterns to make dresses; tell how devices work; describe the fundamentals of baseball; use graphs, tables, maps, and pictures in written or oral reports.

   b. Give speeches. For example:

   Report on group projects; talk on current events and social problems such as water pollution and conservation; give campaign speeches for school offices.

   c. Write legibly and speak clearly. For example:

   Print and write in script; spell age-appropriate words correctly; pronounce words clearly; use language understandable to peers and associates.

   d. Write reports and summaries. For example:

Take notes from reference books; prepare reports using reference materials; summarize magazine and newspaper articles.

e. Write letters, want ads, and telegrams; For example:

Write letters and postcards requesting pamphlets and technical information; write want ads to sell bicycles and to obtain part-time jobs.

f. Fill out forms. For example:

Fill out school class enrollment forms, applications for part-time jobs, money orders and order blanks for multiple items as in mail order catalogues.

2. Understand communications.

a. Understand written instructions, directions, and information. For example:

Understand instructions giving steps for preparing reports and doing projects; scan for the general notion by reading passages quickly to get the gist; read and understand periodicals such as Boys' Life, Mademoiselle, Model Airplanes, and Farm Digest; use references such as encyclopedias, library card catalogues, and files.

b. Understand spoken instructions, directions, and information. For example:

Understand instructions to play new games and to do assignments; understand instructions of employers about how to do tasks and jobs.

c. Understand pictorial, graphic, and symbolic information. For example:

Understand meanings of street and highway signs; know common abbreviations; interpret line, bar, and circle graphs.

3. Interact verbally with others. For example:

Converse with other persons face-to-face and on telephones; participate in group discussions; relay oral messages verbally and in writing; ask and answer questions; introduce persons.

C. Have generally useful manual-perceptual skills.

1. Use common tools and equipment. For example:

Use tools such as hand saws, chisels, squares, levels, wrenches, tape measures, knives, compasses, and protractors; use equipment such as electric mixers, irons, drills, sewing machines, knife sharpeners, air pumps, paper cutters, lawn mowers, and vacuum cleaners.

2. Make and assemble, using appropriate materials. For example:

Make skate boards, doghouses, book shelves, and other such objects, using wood and plastics for those requiring beauty and ease in forming; prepare meals; assemble model airplanes, cars, and mobiles; arrange flowers; collate and staple papers; assemble crystal sets and electrical projects, recognizing that copper is used instead of steel for conducting electricity; sew aprons and pot holders; knit and crochet.

3. Adjust, repair, and maintain. For example:

   Adjust binoculars and microscopes; wash and wax cars; set timers on clock radios and stoves; set controls on washing machines and dryers; change bicycle tires; thread bobbins; replace fuses in electrical circuits; clean stoves and refrigerators; wash windows; set mouse traps; empty or change dust bags in vacuum cleaners; mow lawns.

4. Read displays and scales. For example:

   Read speedometers, fuel gauges, graduated cylinders, barometers, rain and wind gauges, clinical thermometers, cost and gallons on gasoline pumps, and sports score boards.

5. Make visual representations. For example:

   Sketch three-dimensional pictures of rooms, objects, and buildings; draw simple floor plans of furnishings in rooms.

D. Have generally useful information-processing and decision-making skills.

1. Learn efficiently and remember specifics, procedures, and principles which are basic to further learning or which are frequently needed in their work. For example:

   Learn and remember new procedures and generally useful skills associated with home and extracurricular activities such as shortcut mathematics computations and how to devise mnemonic schemes, operate farm and home equipment, use card catalogues, and make notes from reference books.

2. Apply concepts, principles, and procedures in circumstances different from those in which learned. For example:

   Use acquired language skills in writing papers or in speaking in other courses; bring up ideas discussed in one class in the context of another; use knowledge of electricity to repair light cords; use the science of heat and food utilization to control weight; use knowledge of magnification to read fine print and see details on photographs.

3. Analyze information and define problems. For example:

   Recognize evasiveness and double talk; observe poor bicycle functioning and determine cause of trouble; recognize that educational and vocational decisions must be made; judge their own performances in school work, home chores, part-time jobs, sports and games, and peer group rapport in terms of how well they would like to be doing.

4. Collect and organize data. For example:

   Organize filing systems with numbers, letters, and topical headings; recognize when there is insufficient information to solve problems; schedule programs for clubs and classes; arrange tools and materials in work bench areas; survey the opinions of a number of friends before making decisions; evaluate sources of information.

5. Develop and evaluate alternatives. For example:

   Evaluate watercolors, chalk, crayons, and other art media against the criterion of ease of changing mistakes; consider possible outcomes of alternative actions such as joining or not joining peer groups, doing or neglecting assigned school work, obeying or disobeying crossing guards; evaluate which of two part-time jobs to accept; evaluate which of two social activities to attend.

6. Make decisions or choose alternatives in terms of relevant criteria. For example:

   Judge oral class reports of other students by applying given standards; select the most pertinent reference facts to include in reports; decide the sequence in which to perform tasks; choose activity clubs to join; decide which of several motion pictures to attend.

7. Devise plans, new ideas, and better ways of doing things. For example:

   Plan group games and projects; devise schemes for coding messages; design stools and bookends; set club purposes and goals.

8. Implement and modify plans on the basis of feedback. For example:

   Spend additional time on homework and less on play if homework problems require more time than anticipated; choose other days to go to movies if help is needed at home; devise new topical headings for filing systems if original ones do not classify material as logically as expected.

E. Have generally useful interpersonal skills.

1. Interact constructively with supervisors. For example:

   Attempt to understand responsibilities of persons in authority; express minority or new viewpoints constructively and work to change undesirable practices.

2. Provide effective leadership. For example:

   Influence others to obtain their cooperation without dominating them; mediate differences; intercede for those unjustly criticized; volunteer to lead group projects; set good examples for others; praise work well done; take the initiative in welcoming new persons to groups, putting them at ease, and helping them feel wanted.

3. Work effectively with peers, co-workers, and others. For example:

   Attempt to understand viewpoints of others; are sensitive to nonverbal cues such as expressions, gestures, tone; cooperate on group projects and in team sports; talk over differences and compromise when necessary to reach agreements and solutions.

F. Have employment-seeking skills.

(1) Know kinds of jobs available to persons of their own age and sex (for example, delivery, domestic, babysitting, gardening).

(2) Know ranges of wages currently being paid for part-time jobs they can do.

(3) Know where to look for part-time and summer jobs (for example, school counselors, local businesses, use of position-wanted ads).

(4) Can read and understand help-wanted ads in local newspapers (such as abbreviated words and requirements).

(5) Know information to inquire about regarding jobs (such as pay, hours, and duties).

IV. PRACTICE EFFECTIVE WORK HABITS

Effective work habits are essential to satisfactory job performance, no matter what one's career or occupation. Until a worker has developed good work habits in applying his generally useful and occupationally specific skills, his career and occupational development is not complete.

By the age of nine, children should be exhibiting behaviors in their school work, home chores, and play activities that are the roots of effective work habits. These habits should be more obvious in 13-year-olds, who have had increased opportunities to learn and practice them. The behaviors should have become habitual in the action of 17-year-olds in school and at work.

A. Assume responsibility for own behavior.

(1) Know they are responsible for their own behavior.

(2) Attend school regularly and are usually punctual for scheduled meetings and appointments (for example, classes, transportation, lunch, school, office, out-of-class meetings, and home schedules).

(3) Pay attention to assignments and explanations; complete and submit homework and project assignments when due; check own work for thoroughness and accuracy.

(4) Do fair share in any group task (for example, do own part of team work, and help clean up classrooms).

(5) Observe rules and regulations, questioning those they believe are unfair.

(6) Keep parents and teachers informed of their whereabouts (for example, field trips, meetings, games).

(7) Avoid damaging others' property and exercise care for own and others' safety.

B. Plan work. For example:

Know when assigned or volunteer work on extracurricular projects must be completed, as for contests, plays, and special programs; know when and where to perform part-time job duties; identify explicit duties, goals, and deadlines; set reasonable priorities on tasks, first doing those that require urgent attention or that require the most effort; schedule activities around key events that are fixed or critical; consider their own unique abilities and limitations in their planning.

C. Use initiative and ingenuity to fulfill responsibilities.

1. Use initiative but seek assistance when needed. For example:

Do more than required or expected, such as reading beyond assigned pages, asking to make up work that they have missed, and volunteering to learn special skills.

2. Are resourceful in accomplishing work. For example:

Think of ways to perform part-time work more quickly and more effectively, as by eliminating unnecessary steps in tasks; think of ways to save time in doing school work or outside group tasks, as by standardizing methods of doing frequent, similar tasks; use reminder systems such as lists of things to do.

D. Adapt to varied conditions.

(1) Apply self to best of ability in spite of setbacks.

(2) Maintain self-control in emergencies (such as fires, accidents, and storms).

E. Maintain good health and grooming.

(1) Refrain from use of harmful drugs.

(2) Take precautionary measures to prevent illness (for example, exercise regularly; avoid unnecessary exposures; eat balanced meals).

(3) Take necessary steps to regain health during and after illness (for example, take prescribed medicine; rest; avoid overexertion).

V. HAVE POSITIVE ATTITUDES TOWARD WORK

Today more than ever there is a great diversity of life styles. An occupation or career is only one way of achieving personal self-fulfillment in life. Nevertheless, it is possible within the context of career and occupational development to identify desirable attitudinal goals that should result from the educational process. Thus, National Assessment seeks to assess attitudes toward work not only in terms of societal goals but also as acceptance and understanding of the diversity of life styles, regard for competence and excellence in endeavors of many different kinds, and pride in one's own achievements.

A. Recognize the bases of various attitudes toward work.

Know that appropriate work can be a source of personal satisfaction.

B. Hold competence and excellence in high regard.

(1) Appreciate the accomplishments and contributions of others regardless of their backgrounds (for example, ethnic group, sex, education, and nationality).

(2) Recognize excellence attained through activities other than work (for example, housewife, artist, and volunteer worker).

C. Seek personal fulfillment through own achievements.

(1) Set personal goals and know when achievements do and do not measure up to reasonable standards of excellence for themselves, and seek to improve own performances.

(2) Decide priorities and achieve satisfaction from doing well those things which are personally important.

(3) Want to achieve some economic independence through part-time and summer jobs.

D. Value work in terms of societal goals.

(1) Understand the value of work and other constructive activities as social responsibilities.

(2) Respect honest work engaged in for a living and do not differentially value persons on the basis of earnings, education, or occupation.

(3) Recognize the contributions and abuses of various vocations to the well-being of individuals, groups, and society.

Chapter IV

CAREER AND OCCUPATIONAL DEVELOPMENT OBJECTIVES

17-Year-Olds

This chapter presents career and occupational development objectives appropriate for students finishing senior high school. It is assumed that these students have progressed through the various stages of career development presented in Chapters II and III of this publication. Persons unfamiliar with the objectives listed in these two chapters may wish to skim this material before proceeding. It would also be helpful to examine the discussion presented on pages 5 and 6 of this bulletin. As indicated on page 5, specific vocational and occupational skills have been purposely omitted from the COD objectives listed in this bulletin. It is important for the reader to keep this in mind when examining the objectives presented in this chapter.

Along with the more general kinds of career and occupational development skills referred to in this chapter, the Louisiana State Plan for Career Education calls for junior and senior high school students to engage in more intensified practical training oriented toward either the acquisition of job entry skills for employment or entry skills needed to pursue advanced study and training.

At this stage of career and occupational development, students are expected to have an understanding and acceptance of basic work habits and attitudes and be competent in basic subjects such as reading, computation, writing, and social studies.

COD Objectives

I. PREPARE FOR MAKING CAREER DECISIONS

This objective covers knowledge and activities necessary for making informed career decisions. One generally thinks of career planning primarily in terms of high school or college students; however, career planning is a life-long task of exploring and weighing reasonable alternatives. Even among 9-year-olds there are behaviors that will bear fruit later in intelligent career decisions. For 9-year-olds such behaviors include a beginning awareness of abilities and interests, of common occupations, and of the fact that some day they will need to accept adult roles. At the other extreme of adulthood, career planning means weighing current occupational status against capabilities and interests, and planning to improve within the context of present employment or through retraining and change of occupation.

A. Know own characteristics relevant to career decisions.

1. Be aware of own current abilities and limitations.

Perceive own specific abilities that may affect pending career decisions (for example, are aware that they have mechanical ability, moderate literary ability, are deficient in mathematical skills, work well at routine tasks, are persuasive, are not very creative).

2. Be aware of own current interests and values.

Are aware of own current interests and values that may affect career decisions (for example, know that they are oriented toward securing immediate employment, toward performing services for others, toward scientific or clerical work, toward making or doing things with their hands).

3. Seek knowledge of themselves.

Discuss and evaluate own interests, abilities, goals and values not only with counselors in school but also in government and private employment agencies (for example, discuss results of scholastic and vocational guidance tests taken for specific purposes; compare own evaluation of abilities with opinions of others they respect; evaluate the accuracy, reliability, and relevance of information secured from different sources for making pending career decisions; use several sources of information to avoid judging from one exposure).

B. Know the characteristics and requirements of different careers and occupations.

1. Know the major duties and required abilities of different careers and occupational families.

(1) Know the major duties and required abilities of a wide range of occupations and occupational families (for example, business/sales--salesman, personnel manager, accountant; social science--lawyer, librarian, psychologist; technical--lab technician, computer operator, photographer; service--cosmetologist, chef, fashion designer).

(2) Understand differences in responsibilities within occupational families (for example, laboratory technician, chemist, laboratory supervisor; custodian, custodian foreman, building and grounds supervisor; stock clerk, saleswoman, department head, purchasing agent, store manager; ambassador, consul, foreign service officers for labor, information, etc.).

2. Know differences in work conditions among and within occupational families.

(1) Know relative income levels for common occupations (for example, know that business executives earn more money than clerical employees; know that skilled workers earn more than unskilled workers; know that airline pilots earn more than stewardesses); understand the effects of public demand upon income in such occupations as writing and acting; understand that fringe benefits differ among occupations (for example, that civil servants and union members typically have prescribed benefits whereas the self-employed must plan own benefits).

(2) Recognize that occupations influence the kind of home life persons have (for example, are aware that truck drivers frequently are away from home; know that farmers sometimes must work long hours; know that shift jobs may require work at night).

(3) Know which people in different occupations work together (such as editors and authors; carpenters and contractors; nurses and physicians); know which people have minimum work contact with others (for example, artists, game wardens, housekeepers).

3. Know entry requirements for occupations.

(1) Understand the relevance of school curricula to occupational families (for example, know what courses to take to obtain jobs as draftsmen and mechanics; know that classes in English are relevant to careers as writers; know what classes will be useful for homemaking; know what courses to emphasize for contemplated careers as biologists).

(2) Know the educational requirements for a wide range of occupations (for example, know that doctors must intern following their academic training; know that an electrician or plumber must work several years as an apprentice; know that many jobs such as file clerk, taxi driver, or nurse's aid usually require only a short period of on-the-job training; recognize that many professional and technical fields will require continuing education after employment).

(3) Know the length of school required for various academic degrees (for example, are aware that an associate degree requires two years beyond high school, bachelor's normally requires four years, master's requires one to two years beyond bachelor's, Ph.D and M.D. require three to four years beyond bachelor's).

(4) Know the specific nonacademic entry requirements for various occupations (for example, know that union membership is required in order to hold many jobs; know that state and local licensing is required for many jobs; know that capital investment is necessary to set up an office as a doctor or dentist).

4. Be aware of the impact of social and technological changes on occupations.

(1) Understand that technological, economic, and social changes result in decreases in the availability of some kinds of jobs and increases in others (for example, know that new discoveries and inventions in business and industry change the requirements for various kinds of skills; know that there are reduced opportunities in mining, factory work, and handcrafts and increased opportunities in service occupations, space, air transportation, and computer industries; know that major trends in the job market are toward specialized technical jobs requiring more training).

(2) Know that social conditions modify occupational entry requirements through such programs as New Careers, MEDEX, and the Manpower Training and Development Act.

(3) Are aware of the trend in educational and hiring practices that enables persons with broad educations in a family or group of occupations to qualify for a number of specific occupations (for example, that high school training in graphic communications permits initial employment as an apprentice or beginner in occupations such as drafting, illustrating, and cartography).

(4) Know that at many entrance points, educational institutions and businesses are modifying requirements for credentials, diplomas, and special qualifications; know that performance after selection is then the criterion for retention.

5. Know important factors that affect job success and satisfaction.

(1) Know possibilities for career advancement beyond entry jobs in different occupations (for example, know that production workers can advance to foremen, that sales clerks can become department heads, that opportunities for advancement for stewardesses are limited, that a starting engineer can become president, that persons trained for one occupation may go into other related occupations).

(2) Recognize that persons must update their skills in such ways as securing additional training, retraining, reading job-related periodicals, attending night school.

(3) Know the consequences of advancement in some occupations (for example, know that the nature of the work of supervisors is different from the work required at lower levels of the job ladder; know that the responsibilities

of higher level jobs may produce greater pressures; know that persons can be promoted in some occupations only if they accept new positions in other locations).

(4) Are aware of the general satisfactions people obtain from various kinds of jobs (such as outdoor work for foresters; operating one's own business; taking care of others as in nursing; the gratification of teaching; associating with certain types of people).

6. Seek information about occupations in general or about specific jobs. For example:

Talk to counselors at schools, employment offices, and training centers; use reference sources, such as Handbook of Jobs Facts, Occupational Outlook Handbook, and brochures about jobs, to obtain information about occupations; seek information about a broad range of careers and occupations to maintain flexibility in their planning, not limiting themselves solely to the more commonly recognized occupations.

C. Relate own personal characteristics to occupational requirements.

1. Associate own abilities and limitations with possible success in present or future occupational pursuits.

Associate developing abilities with potential career and occupational fields (for example, associate success in home economics courses with jobs in food service fields, success in mathematical courses with careers in the broad field of mathematics, good performance in English composition with potential success as journalists or other kinds of writers, skill in drawing with drafting or art, a hobby of rock collecting with a career in geology, experience in 4-H clubs with potential agricultural occupations; associate manual dexterity with success in a craft, awards for sewing work with apparel-making occupations, enjoyment of driving cars with transportation service jobs).

2. Relate personal interests and values to job characteristics and occupations.

(1) Identify job characteristics which are important to them (such as earnings; prestige; intrinsic interest; training opportunities; promotional opportunities; hours; work environment; type of associates; opportunities to work with people, objects, data, and processes; to communicate ideas; to help or serve other people; to attain reknown; to create).

(2) Know types of occupations most likely to satisfy their personal interests and values, and associate realistic concepts of career fields with their developing life styles (for example, know which occupations allow one to serve others; know those occupations which permit one to work outdoors; know which occupations have high income potential or are prestigious; know those occupations that require performance of routine tasks; understand family satisfactions and sacrifices associated with various occupations).

D. Plan for career development or change.

(1) Discuss plans and career problems with competent advisors (such as school counselors, parents, employers, teachers, principals, clergymen, community agency personnel).

(2) Relate personal and external factors when making own career plans (for example, understand their military obligations; contemplate personal characteristics, training requirements, finances, and extra-personal factors such as parental attitudes, family influence, societal needs, possible cultural obstacles, racism, and sexual discrimination; appraise own probabilities of success both subjectively and objectively in different kinds of education or training).

(3) Resolve conflicts in vocational choice (for example, consider practical alternatives; solve differences between own goals and desires of parents and between abilities and unreasonable aspirations).

(4) Understand the value of maintaining a number of occupational alternatives; recognize the problem of getting locked into narrow fields of specialization.

(5) Reappraise own current school or training programs to insure that appropriate occupational and/or academic requirements will be met, and modify plans to overcome any deficiencies.

(6) Plan sources and extent of financial aid (such as part-time employment, cooperative work-study programs, apprenticeship training programs, parental assistance, personal savings, possible athletic and academic scholarships, special assistance programs for the educationally deprived, and loans) and identify the requirements and restrictions associated with each; project plans for financial support over the time required for education or training.

(7) Investigate schools, training programs, and employment opportunities suited to own goals, capabilities, and financial resources; visit or correspond with schools and training institutions.

(8) Know of and can efficiently use sources of information (such as college catalogues, occupational references, government publications, industrial training program brochures) to find out about required courses, length of training time, cost of preparation, financial aid available, alternative methods of preparing for careers, and quality of training and placement assistance.

2. Be aware of alternative career choices or occupations and consider the consequences of career changes.

Consider career alternatives by identifying occupations related vertically (for example, member of survey team--civil engineer; electrical draftsman--electrical engineer) and horizontally (such as auditor--accountant; computer programmer--systems analyst; waitress--receptionist).

II. IMPROVE CAREER AND OCCUPATIONAL CAPABILITIES

Along with planning for a career goes the actual doing of things that further those plans or that widen one's knowledge and skills. This objective is concerned

with the implementation of career plans and with active participation in both in-school studies and out-of-school activities that enhance one's career and occupational capabilities.

(1) Pursue education and training (such as college preparatory programs, vocational and on-the-job training, night school, correspondence courses).

(2) Obtain part-time and summer work and gain exposure to or experience in possible career fields (for example, sales clerk, library page, hospital aid, office clerk, gardener, laborer).

(3) Pursue hobbies (for example, cars, electronics, literature, building, gardening, sewing).

(4) Participate in extracurricular and community activities (such as car clubs, organized sports, 4-H, drama groups, foreign language clubs, political rallies, neighborhood youth clubs, school yearbooks and newspapers).

(5) Study on own initiative (for example, read magazines and books not required by school or work; make conscious effort to increase vocabularies; set up personal reading programs).

(6) Seek out people who can help them develop their interests (such as successful businessmen, academicians, research scientists, musicians, skilled journeymen, union leaders).

(7) Visit places of interest (such as museums, universities, aquariums, factories, planetariums, businesses, farms, proving grounds).

III. POSSESS SKILLS THAT ARE GENERALLY USEFUL IN THE WORLD OF WORK

The six main categories of generally useful skills are numerical, communications, manual-perceptual, information-processing and decision-making, interpersonal, and employment-seeking. Some of these skill categories apply to other subject areas in the National Assessment besides career and occupational development. For example, communication skills are related to both the reading and writing areas; numerical skills are included in the mathematics area; information-processing and problem-solving skills include many social studies behaviors; and some work habits and interpersonal relations are also found in citizenship. To minimize overlaps, practical or on-the-job behaviors, rather than academic skills,

have been selected to illustrate the COD sub-objectives whenever possible.

Second, measures common to other subject areas will not be used in the assessment of generally useful skills but will be referenced in reporting of results.

A. Have generally useful numerical skills.

1. Perform calculations and transactions involving money. For example:

Calculate sales tax; calculate interest and carrying charges; balance bank accounts; budget income; project budgeted credit card expenditures and payments; apply for loans.

2. Understand numerical values in graphs, charts, and tables. For example:

Interpolate values from tables; extrapolate values from graphs; read income tax tables; read stock market prices.

3. Use measurement equivalents, ratios, and proportions. For example:

Convert room dimensions into square units of floor area; express time and distance measures in miles per hour; scale down the ingredients in mixtures; calculate miles per gallon of gasoline; figure amounts of liquids for fertilizer solutions given ratio of the liquids.

4. Estimate numerical quantities. For example:

Estimate areas of geometric figures such as triangles; estimate floor areas in houses, costs of weekend trips; estimate interest on principal and sum of interest and principal.

5. Compare numerical values. For example:

Compare interest rates of money lenders, earnings from payments per hour versus piecework, savings on commuter books versus regular fares, costs per unit, such as the better buy of two prices for canned goods; compare differential earnings from feeding livestock different lengths of time; compare purchase price with used selling price or pawned value; compare cost of new versus cost of used item.

6. Calculate amounts needed to do practical jobs. For example:

Calculate how long to cook roasts, amount of feed needed for a given number of farm animals, square yards of carpeting needed to cover floors, number of sheets of plasterboard required to enclose rooms, bushels of seed grain needed to sow a given number of acres, cost of gasoline for auto trips given required information, number of sheets of plywood needed to cover floor, board-feet of lumber required to build objects.

7. Make graphic representations of numerical quantities. For example:

Represent relative sizes of two given quantities by scaled drawings; plot points on coordinate systems.

8. Interpret statistical data. For example:

Recognize misleading assumptions, conclusions, and statements in the use of statistics or presentation of data; understand the concepts of central tendency and variance; interpret trends from information such as demand for products or change in number employed; understand accident statistics and industrial failure rates.

B. Have generally useful communication skills.

1. Communicate understandably (speak, write, demonstrate, and use nonverbal means).

a. Explain, describe, demonstrate, and give directions. For example:

Use actual equipment to explain processes and principles; tell how to do tasks and jobs, transfer on streetcars and bus routes, and replace parts; explain cause and effect relationships and concepts such as that of supply and demand; use charts to describe organizations; use diagrams to explain assembly of parts.

b. Give speeches. For example:

Introduce guest speakers; talk to scouts and 4-H groups; speak pro or con at protest rallies; speak in formal discussions and debates.

c. Write legibly and speak clearly. For example:

Print and write in script; spell age-appropriate words correctly; pronounce words clearly; use language understandable to peers and associates.

d. Write reports and summaries. For example:

Write minutes of meetings; describe accidents; summarize important points of speeches; take notes from lectures; outline material; write news articles, compositions, and summary reports of opinion surveys.

e. Write letters, want ads, and telegrams. For example:

Write telegrams and job application letters.

f. Fill out forms. For example:

Complete application forms for jobs, drivers' licenses, loans, credit cards, college admission, and social security numbers; make out accident reports.

2. Understand communications.

a. Understand written instructions, directions, and information. For example:

Follow directions for laying out dress patterns and installing pieces of

equipment; understand instructions for completing and submitting forms; read and understand periodicals such as sewing, knitting, and homemaking magazines, Consumer Reports, and Popular Mechanics; use references such as college catalogues, transportation schedules, and zip code handbooks.

b. Understand spoken instructions, directions, and information. For example:

Understand information given by counselors about registering for courses, preparing for careers, and planning school activities.

c. Understand pictorial, graphic, and symbolic information. For example:

Understand codes and symbols as used in diagrams of electrical circuits, on weather maps, on dress patterns, on house and building plans, and in technical manuals.

3. Interact verbally with others. For example:

Participate in panel discussions; make appointments; take notes in interviews.

C. Have generally useful manual-perceptual skills.

1. Use common tools and equipment. For example:

Use tools such as socket and compressed-air wrenches, miter boxes, micrometers, calipers, electric knives, and soldering irons; use equipment such as electric saws, lathes and sanders, floor polishers and sanders, automobiles, farm shop machinery, typewriters, duplicating machines, and desk calculators.

2. Make and assemble, using appropriate materials. For example:

Make dresses and furniture from patterns; make indoor and outdoor objects such as trays and ornaments, recognizing that copper and aluminum do not corrode; build objects from wood and metals and apply finishes to protect the materials from insects and the elements; make household furnishings from plastics which resist staining; assemble "knock-down" furniture, swing sets, steel shelving, and radio component kits; install household appliances and traverse rods; build slot cars; set out plants and trees.

3. Adjust, repair, and maintain. For example:

Adjust focus and hold controls on television sets; change automobile tires; clean and check spark plugs; sharpen knives; adjust tension on door closers and pulley belts; make fine adjustments on camera apertures, carburetors, and lawn mowers; replace faucet washers and furnace filters; paint rooms; prune bushes and trees; repair broken furniture and fences.

4. Read displays and scales. For example:

Read instruments on automobile dashboards, multimeters for volts, ohms, and amperes, pressure gauges, and radio and TV tube testers; measure inner and outer dimensions of pieces of pipe.

5. Make visual representations. For example:

Draw landscapes with proper perspectives, organizational charts, floor plans of houses, and diagrams showing how belts fit on wheels to operate machinery and how film is threaded through movie projectors; sketch relative positions of vehicles in accidents.

D. Have generally useful information-processing and decision-making skills.

1. Learn efficiently and remember specifics, procedures, and principles which are basic to further learning or which are frequently needed in their work. For example:

Learn and remember important concepts, principles, and skills useful in future training and employment such as typing, car maintenance, operation of office machines, steps to take in doing work in laboratories, kinds of stitches appropriate for various sewing tasks, office procedures, and how to drive cars in all kinds of traffic and weather conditions.

2. Apply concepts, principles, and procedures in circumstances different from those in which learned. For example:

Use principles of design to furnish and arrange rooms and to improve appearance of homes; use knowledge of mechanisms to maintain and repair small engines; use knowledge of automobile operation to perform routine car maintenance; use knowledge of foods to plan and prepare meals; use principles of physics when cooking food at different altitudes and in pressure cookers; use shorthand to take notes and typing to prepare reports; use knowledge of electricity to repair lamps and small appliances; use chemistry to remove spots from clothes; use knowledge of chemistry and biology to feed trees and gardens; use new vocabulary words in conversations; use the scientific method in social situations in order not to prejudge until facts are known.

3. Analyze information and define problems. For example:

Recognize unstated assumptions, emotional appeal, and illogical arguments; distinguish relationships between the requirements of common occupations and the contents of school subjects; troubleshoot malfunctions in equipment such as typewriters and automobiles; diagnose communication difficulties between two people; recognize cause-effect relationships; deduce themes in literary works.

4. Collect and organize data. For example:

Arrange own study plans; outline compositions, using two or three degrees of subordination; identify and evaluate sources of information in terms of accuracy and reliability; price articles in a number of stores before purchasing; collect information relevant to personal characteristics and world of work; schedule and coordinate tasks of several people on projects; anticipate when supplies will be needed, account for time needed for delivery, and order accordingly; combine information from two or more sources, as for term papers based on a number of reference books.

5. Develop and evaluate alternatives. For example:

Estimate the objective and subjective probabilities of succeeding academically at several different kinds of schools; develop several plans for financial support during education or training; determine value priorities of conflicting goals such as several different places for education; weigh several job offers in light of personal criteria of desirability.

6. Make decisions or choose alternatives in terms of relevant criteria. For example:

Decide either to repair or replace components of cars depending on cost or time; decide either to buy or make dresses, depending on which is less expensive; select several schools to apply to for admission after determining those that offer factors relevant to personal goals such as scholastic standards, financial aid, and opportunity for independent study; choose from among several job offers the job best suited to personal characteristics, present needs, and future goals.

7. Devise plans, new ideas, and better ways of doing things. For example:

Outline plans for carrying out complex tasks such as tutoring other students and conducting opinion surveys and elections; suggest more convenient arrangements of supplies in stockrooms and locations of office equipment; design furniture and garments; alter dresses to make them fashionable; plan to obtain financial support necessary to implement career development plans; coordinate schedules for work and extracurricular activities; plan best methods of earning varsity letters.

8. Implement and modify plans on the basis of feedback. For example:

Reassign tasks of committee members if individual talents are different than originally thought; rearrange contents of kitchen cupboards to permit more efficient movements in the kitchen; modify major curricula in school if their interests change; seek employment if unable to obtain admission to school when first desired; modify techniques in sports by learning from mistakes.

E. Have generally useful interpersonal skills.

1. Interact constructively with supervisors. For example:

Attempt to understand responsibilities of persons in authority; express minority or new viewpoints constructively and work to change undesirable practices.

2. Provide effective leadership. For example:

Elicit better efforts from others by good example, encouragement, and enthusiasm; schedule, coordinate, and evaluate objectively the work performance and work products of others; assume responsibility for errors of groups of which they are leaders.

3. Work effectively with peers, co-workers, and others. For example:

Consider time schedules and work demands of others and coordinate own activities accordingly; consult others when making plans that affect them; weigh consequences to others of own acts such as practical jokes, gossip, false

accusations, and malicious insinuations; provide information needed by others; are honest in matters involving information or money; help others in need of assistance in such ways as assuming part of their work loads, demonstrating new techniques and equipment, and suggesting ways that others can solve problems.

F. Have employment-seeking skills.

(1) Know factors relevant to jobs they are personally interested in (such as availability, entry requirements, geographic locations, pay scales, sick leave, insurance, vacations, and job demands).

(2) Know where to seek information regarding job openings and know advantages and disadvantages of each (such as employment agencies, state employment offices, college placement offices, personnel departments, and government agencies).

(3) Can write position-wanted ads.

(4) Can write letters of application and background resumes.

(5) Prepare for job interviews by taking with them necessary information such as social security numbers and addresses and phone numbers of references.

(6) Explain to prospective employers what they are seeking in terms of conditions and rewards for themselves in jobs (such as hours, pay, and experience).

(7) Fill out job application forms completely, accurately, and neatly.

(8) Dress and groom appropriately for job interviews (for example, clothes, make-up, and accessories).

(9) Conduct themselves with poise in interviews (including such things as manners, posture, tact, and enthusiasm).

(10) Know additional conditions of jobs to inquire about (such as fringe benefits, opportunities for advancement and training, and union membership).

IV. PRACTICE EFFECTIVE WORK HABITS

Effective work habits are essential to satisfactory job performance, no matter what one's career or occupation. Until a worker has developed good work habits in applying his generally useful and occupationally specific skills, his career and occupational development is not complete.

By the age of nine, children should be exhibiting behaviors in their school work, home chores, and play activities that are the roots of effective work habits.

These habits should be more obvious in 13-year-olds, who have had increased opportunities to learn and practice them. The behaviors should have become habitual in the actions of 17-year-olds in school and at work.

A. Assume responsibility for own behavior.

(1) Know they are responsible for their own behavior; understand and accept consequences of actions.

(2) Are present regularly at school and at work; are punctual for appointments; notify persons concerned when necessarily absent or detained.

(3) Perform work to the best of their ability without wasting time and effort; follow through on commitments.

(4) Check accuracy, completeness, and quality of own work and are aware of the consequences of errors (for example, know that poor quality work may cause loss of customers or clients and will waste time and materials; acknowledge mistakes; rectify errors; admit failure to understand).

(5) Know own limitations and do not disregard them (for example, skills, knowledge, physical stamina).

(6) Observe rules and regulations and carry out established policies and procedures, questioning and attempting to change those they believe are unfair.

(7) Avoid damaging property of others and exercise care for own and others' safety.

B. Plan work. For example:

Set priorities on use of time; know deadlines for assignments and projects; write notes of work assigned and of specifications for end products; are aware of own responsibilities at school, work, and home; use intermediate goals as checkpoints on progress toward long-range objectives; monitor progress toward goals to detect the need for revisions in the goals themselves or in the approach being followed to reach the goals; schedule and organize tasks to allow optimum time to complete each one before deadlines; allow time in schedules for unanticipated urgencies and unscheduled time demands; anticipate when workloads or schedules require modified plans or methods; schedule more challenging or creative work to match daily peaks in own energy cycles and more routine or passive work when energies are low; read reports before meetings.

C. Use initiative and ingenuity to fulfill responsibilities.

1. Use initiative but seek assistance when needed. For example:

Are alert to tasks that must be done and that they can do, and then proceed

to do them on own initiative; think of ways that they can contribute to organizations of which they are members; inform employers of any unused abilities; ask teachers and employers to explain details of required work if necessary.

2. Are resourceful in accomplishing work. For example:

Vary pace to maintain efficiency and effectiveness; are alert to new and better ways of doing things and recommend improvements to supervisors; eliminate unnecessary tasks; improvise methods and tools whenever possible; spend minimum time in reading by screening out irrelevant material, skimming for main ideas, reading selectively, and practicing rapid reading techniques; economize writing time by preparatory outlining, writing in simple, direct styles, and using standard formats for routine material.

D. Adapt to varied conditions.

(1) Discriminate between those nonideal situations which cannot be changed and those which need not be accepted; adapt to the former and protest and attempt to change the latter.

(2) Adjust to varying assignments and to changes in methods and work situations.

(3) Concentrate and maintain output in spite of disruptions, malfunctions, noise, and competition.

(4) Tolerate nonideal work surroundings and situations.

(5) Work under occasional pressures of time, overload, and stress.

(6) Persevere in spite of setbacks (such as defeat, failure, and opposition).

(7) Remain calm and use good judgment in crises, emergencies, and unexpected events.

E. Maintain good health and grooming.

(1) Dress and groom appropriately for work or school.

(2) Take good care of clothes (for example, properly launder and iron or dry clean; repair; store properly).

(3) Have regular medical and dental checkups.

(4) Seek professional help when needed (for example, doctor, dentist, and psychiatrist).

V. HAVE POSITIVE ATTITUDES TOWARD WORK

Today more than ever there is a great diversity of life styles. An

occupation or career is only one way of achieving personal self-fulfillment in life. Nevertheless, it is possible within the context of career and occupational development to identify desirable attitudinal goals that should result from the educational process. Thus, National Assessment seeks to assess attitudes toward work not only in terms of societal goals but also as acceptance and understanding of the diversity of life styles, regard for competence and excellence in endeavors of many different kinds, and pride in one's own achievements.

A. Recognize the bases of various attitudes toward work.

(1) Recognize that people have different attitudes toward work (for example, know that some people work only for the money, that some people find their work absorbing and rewarding, that some people avoid looking for jobs, and that some people place work second in importance to other more personally meaningful activities).

(2) Understand why people have the attitudes that they do toward work (for example, understand that attitudes toward work are affected by many factors, such as education, age, sex, family income, race, religion, nationality, work experience, and self-concept; know that some people have experienced inequalities in obtaining work and on jobs; know that the "work ethic" is a predominant attitude in America's history; know that differences in social, ethnic, racial, and educational background make it easy for some people to obtain good jobs and difficult for others to obtain any job; recognize that frustrated ambitions may affect attitudes).

(3) Are aware of the human need to experience personal satisfaction in own accomplishments (for example, recognize that people's aspirations differ, that workers gain different types of satisfaction from their jobs, and that some people are content with jobs that offer no opportunity for expression of ideas, creativity, or decision-making, but only the satisfaction of accomplishing routine tasks; know that some people find personal fulfillment in activities outside work).

(4) Understand the reasons for their own attitudes toward work (for example, recognize the effects of personal experience in seeking or doing work; recognize the influence of attitudes and experiences of peer groups and family members; understand the part that self-concept and sense of self-esteem play in their attitudes toward the world of work).

(5) Understand the personal and societal consequences of their own attitudes (for example, know that negative attitudes interfere with and positive attitudes contribute to effective job performance; know that many employers consider attitude as important as skill; weigh the consequences of disregard for the world of work versus active planning and preparation for roles in it).

B. Hold competence and excellence in high regard.

(1) Encourage others to develop and to use their skills and abilities to achieve maximum competence.

(2) Accept the diversity of life styles of others, understanding that excellence is not necessarily confined to work activities.

C. Seek personal fulfillment through own achievements.

(1) Are willing to vouch for own work and work products.

(2) Feel responsible for making wise career choices.

(3) Strive to achieve economic self-sufficiency through continuing education or employment.

D. Value work in terms of societal goals.

(1) Believe that each person should strive to be self-supporting to the extent that he is able.

(2) Appreciate the economic interdependence of their families and other persons in the community, of businesses with other businesses, and of their communities with other communities near and far.

(3) Encourage and help others to secure employment.

(4) Understand the purposes of laws concerning child labor, strikes, workman's compensation, working conditions, minimum wages, and hours of work.